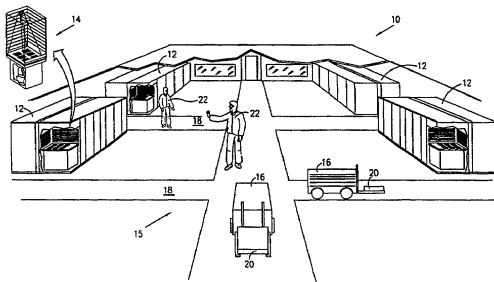


## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>7</sup> : <b>G01N 21/88</b>		A2	(11) International Publication Number: <b>WO 00/26645</b>
		(43) International Publication Date:	11 May 2000 (11.05.00)
(21) International Application Number: PCT/IL99/00583		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).	
(22) International Filing Date: 2 November 1999 (02.11.99)			
(30) Priority Data: 126866 2 November 1998 (02.11.98) IL			
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(54) Title: APPARATUS AND METHOD FOR FABRICATING FLAT WORKPIECES



## (57) Abstract

Method and apparatus for manufacture and inspection of flat articles, such as flat panel display substrates, that are manufactured in a contamination-sensitive environment. In particular, a manufacturing step such as applying coatings to the article is performed in a self-contained micro-environment, typically characterized by an airborne particulate concentration which is substantially lower than its surroundings. Automated inspection apparatus is provided inside the self-contained micro-environment of the fabrication equipment to inspect the article after completion of the fabrication step and before transfer of the article to other fabrication equipment. The inspection apparatus includes an illumination subsystem illuminating the article with various configurations of dark field and bright field illumination, a staring array sensor capturing images of the article under various illumination configurations and a computer that analyzes the images to automatically detect defects.